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EXAMINER
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SCHEIBEL, ROBERT C

ART UNIT	PAPER NUMBER
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2467

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/537,323	<b>Applicant(s)</b> LECOMTE ET AL.	
	<b>Examiner</b> ROBERT C. SCHEIBEL	<b>Art Unit</b> 2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2005 and 20 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-28, 30-34 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 29 and 35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. The claims **20-36** are objected to because of the format. The claims are for a process which does not explicitly recite the separate steps of that process. The format of the claims should be changed to explicitly recite the process steps.
2. Claims **20, 28-30, and 36** are objected to because of the following informalities:
  - Claims **20, 28, 30 and 36** include the phrase “images/pictures”. This should be changed to something such as “images or pictures” or “images and pictures” for clarity.
  - In line 2 of claim **20**, the phrase “which nominal stream” should be reworded for clarity. There is not a previous mention of a nominal stream; the claim should be corrected by adding a reference to a “nominal stream” before this phrase or a similar modification.
  - In line 4 of claim **29**, the phrase “TS packets” is objected to as this is the first occurrence of the acronym “TS”. The acronym should be spelled out at its first occurrence.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims **20-24, 26, 27, 30, 32, 34, and 36-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,382,969 to Dawson in view of U.S. Patent 5,903,264 to Moeller et al.

Regarding claim **20**, Dawson discloses *a process for distributing sequences in accordance with a nominal stream format including a succession of images/pictures* (Dawson describes the video throughout as a set of “images” that are ultimately displayed to a user (see lines 40-41 of column 4, for example, which indicates that the invention functions to “facilitate the presentation of seamless video images on the display of a receiver 103”); therefore, the video signal (output in digitized format from element 209 of Figure 2) is interpreted as having a nominal stream format including a succession of images/pictures as this stream contains the information used to present the sequence of images on the receiver's display; as shown in Figure

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1, this video is distributed from the transmitter to the receiver), *which nominal stream, on which an analysis is made prior to transmission to client equipment for generating a modified main stream* (see Figure 6, for example; the nominal stream (the "video signal" in step 601) is analyzed prior to transmission by identifying content suitable for extraction), *has a format of the nominal stream and has images/pictures modified by substitution of selected data by similar data* (the modified main stream is the "video signal that contains marred content" in step 609; this signal has the format of the nominal stream, but has been modified to extract some content and replace it with "marred content"), *but random or calculated* (the marred content is calculated - see lines 17-19 of column 8 which indicates that this marred content "may consist of all black, patterned or other solid color content"; clearly, this content is calculated to represent the appropriate color/pattern), *and has complementary information of any format including substituted data and digital information suitable for permitting reconstruction of a modified nominal stream* (the extracted video is the "complementary information" which is clearly "of any format" and is suitable for permitting reconstruction of a modified main stream as described in lines 42-50 of column 2 which indicates how the extracted images and the marred images are used by the receiver to reconstruct the video signal), *and then for separately transmitting the modified main stream in real time or deferred time* (as shown in Figure 1, the modified main stream is transmitted in channel 105a - as indicated in lines 60-64 of column 4, this contains the modified video signal stream which has had a portion extracted and replaced with marred content; this is transmitted in either real time or deferred time; as shown in Figure 6B, this stream (the "first channel" of Figure 6B) is decoded and presented immediately after receiving the data; the first channel can also be stored (step 645) and thus the transmission of the modified main

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stream could be interpreted as deferred time as well) *and the complementary information in real time at substantially the moment of display from a server to the client equipment* (as shown in Figure 1, the complementary information is transmitted in channel 105b – as indicated in lines 64-65 of column 4, this is the extracted video signal portions which is the complementary information as indicated above; as shown in Figure 6B, the modified main stream (the “second channel” of Figure 6B) is transmitted substantially at the time of display as the data is decoded and displayed directly after it is received; also, the modified main stream (transmitted in channel 105a) and the complementary information (transmitted in channel 105b) are transmitted separately (see also lines 62-66 of column 2 which indicates “...the marred video content in a first channel of the program stream, and transmitting the extracted video content in a second channel...”); the transmitter 101 is interpreted as the server as it provides the video service and the receiver 103 is interpreted as the client), *and for which a synthesis of an available stream in a nominal format is calculated on the client equipment* (this is described in lines 42-50 of column 2 as well as in Figure 6B; both of these show that the receiver (client) receives both channels of information and combines them (synthesizes them) to create a video signal/stream to display to the user), *reconstituted as a function of the modified main stream and of the complementary information and a reading of the stream on the client equipment* (as shown throughout, these two streams (the modified main stream – i.e. the channel with the marred images sent on channel 105a, and the complementary information – i.e. the extracted images sent on channel 105b) are used to reconstitute the video signal to display to the user at the receiver device – see lines 42-50 of column 2 as well as Figure 6B).

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Dawson does not disclose expressly the limitation that *during reading of the stream a stage includes generating a position identifier as a function of characteristics of the stream, which position identifier is transmitted to the server that activates in response sending the complementary information as a function of the position identifier.*

Moeller discloses a system which provides a user with control over the position of a video stream to be sent from a server to the user's device. Moeller discloses the limitations missing from Dawson as follows: *during reading of the stream a stage includes generating a position identifier as a function of characteristics of the stream* (see Figure 7 and the description in the passage from line 51 of column 11 to line 36 of column 12; the user manipulates a "slider bar" to indicate a desired position in the stream; the set top box then calculates a relative position in the stream based on this input; this is performed during the reading of the stream (as indicated in step 162, the slider bar position is "based on the of the video stream received from the media server", so the receiver is in the process of receiving the stream from the server and thus reading the stream); further, the position is generated as a function of characteristics of the stream as the index is based on the relative distance the user moved the slider bar from the current position and thus the position is based at least in part on the current stream location being viewed by the user), *which position identifier is transmitted to the server that activates in response sending the complementary information as a function of the position identifier* (as indicated in step 168 of Figure 7, this position value is sent to the server; as indicated in Figure 8, this activates the server to send information (as in step 208) as a function of the transmitted position identifier ("user input from the slider bar")); while Moeller does not discuss complementary information, it would

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have been obvious to modify Dawson to disclose this limitation as explained in more detail below).

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller. In this combination, the modified main stream (video with marred data) and complementary information (extracted video data) would have been adjusted using the position information controlled by the slider bar functionality discussed above. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. Moeller discloses that this is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 20.

Regarding claim **37**, Dawson discloses equipment for producing a video stream comprising (see Figure 1 of Dawson) a device for analyzing the video stream coming from the server for generating a modified main stream and complementary information (transmitter 101 analyzes the video signal (201 of Figure 2, for example) and generates a modified main stream (105a, for example, which as indicated in lines 28-33 of column 5 is the video signal modified to include marred content (see also step 609 of Figure 6A); this is a modified version of the original video signal and is interpreted as a modified main stream) and also generates complementary information (105b, for example, which as indicated in lines 28-33 of column 5 is the extracted



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video content (see also step 609 of Figure 6A), and complements the modified main stream in that it contains information required for reconstructing the original signal)).

Dawson does not disclose expressly the limitations of at least one multimedia server containing original video sequences, or the limitation of a device for synchronizing transmission of the complementary information as a function of a position identifier transmitted by recipient equipment.

However, Moeller discloses these limitations. Moeller discloses at least one multimedia server containing original video sequences (the video server of Figure 1, for example, which contains original video sequences as it is the device which transmits the video information to the subscribers). Moeller further discloses the limitation of a device for synchronizing transmission of the complementary information as a function of a position identifier transmitted by recipient equipment (as indicated in step 168 of Figure 7, a position value is sent to the server; as indicated in Figure 8, this activates the server to send information (as in step 208) as a function of the transmitted position identifier ("user input from the slider bar")); while Moeller does not discuss complementary information, it would have been obvious to modify Dawson to disclose this limitation as explained in more detail below).

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller. In this combination, the modified main stream (video with marred data) and complementary information (extracted video data) would have been adjusted using the position information controlled by the slider bar functionality discussed above. The rationale for doing so would have

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been to provide the ability to index to any location in a video when watching on-demand video. Moeller discloses that this is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 37.

Regarding claim **21**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Primary reference Dawson does not disclose expressly the limitations of claim 21. Moeller discloses the limitation that each picture of the nominal stream is associated with a position identifier (see lines 42-48 of column 9 which indicates that the sequence headers include timestamps which are “used to provide a time base for the video sequence”; as the video sequence is the stream of video data or pictures which is displayed to the user, each picture in this video sequence is "associated with" a position identifier (the timestamp in the corresponding sequence header)).

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller including the position information (sequence header timestamps) associated with each picture in the nominal stream. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. Moeller discloses that this is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of

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providing the indexing feature for on-demand video to obtain the invention as specified in claim 21.

Regarding claim **22**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Primary reference Dawson does not disclose expressly the limitation that the reading stage comprises calculating the position of the picture read. Moeller discloses the use of a slider bar for user input to index to a specific location in the video sequence. As indicated in lines 1-12 of column 12, the slider bar presents the user with an indication of the current location of the portion of the movie being displayed to the user relative to the start and end of the movie. Thus, the receiving device (set top box) calculates the position of the pictures as they are read in order to update the slider bar display for the user.

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller. Specifically, it would have been obvious to modify the Dawson to include the details of the slider bar which include displaying the current position of the video being displayed to the user. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. By implementing the slider bar as indicated above, the user will be able to easily indicate the location of the video desired based on the current position. Moeller discloses that indexing is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine

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Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 22.

Regarding claim **23**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Primary reference Dawson does not disclose expressly the limitation that the reading stage comprises calculating the position identifier of the stream read. Moeller discloses the use of a slider bar for user input to index to a specific location in the video sequence. As indicated in lines 1-12 of column 12, the slider bar presents the user with an indication of the current location of the portion of the movie being displayed to the user relative to the start and end of the movie. Thus, the receiving device (set top box) calculates the position of the stream as it is read in order to update the slider bar display for the user.

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller. Specifically, it would have been obvious to modify the Dawson to include the details of the slider bar which include displaying the current position of the video being displayed to the user. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. By implementing the slider bar as indicated above, the user will be able to easily indicate the location of the video desired based on the current position. Moeller discloses that indexing is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine

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Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 23.

Regarding claim **24**, Dawson discloses the limitation that the complementary information is transmitted in portions in the packet structure of Figure 5. This is a means for transmitting the overlay information which is the extracted information. (Lines 57-60 of column 6 shows that the overlay information is the extracted video signal content, which as indicated above is mapped to the complementary information of the claim language.)

Regarding claim **26**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Primary reference Dawson does not disclose expressly the limitation of claim 26. Moeller discloses the use of a slider bar for user input to index to a specific location in the video sequence. As indicated in lines 1-12 of column 12, the slider bar presents the user with an indication of the current location of the portion of the movie being displayed to the user relative to the start and end of the movie. Specifically, Moeller indicates that the slider bar is updated using the "position where the video stream or movie is being played" (emphasis added). This indicates that the slider bar position is based on a position identifier in video being presented to the user. In the combination of Dawson and Moeller, this is the reconstituted stream (the combination of the video with marred content and the extracted information). Further, this stream is interpreted as the available stream on the recipient equipment of which the reading conditions the position and the portion to be sent of the complimentary information because (a) the stream is available on the set-top box (the recipient

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equipment), (b) the user input on the slider bar is based on this location as the user moves the slider bar to select a location relative to the current position of the video; this in turn conditions the position and portion of the video which is sent as this value is sent to the server in order to request a new video position to be sent to the set top box (as indicated in Figure 8). In the combination of Dawson and Moeller, this video sent to the set top box comprises the modified main stream (video with marred content) as well as the complimentary information (the extracted video) and thus, the reading of the stream conditions the position and portion of *complementary information* to be sent.

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to apply the slider bar functionality of Moeller. Specifically, it would have been obvious to modify Dawson to include the details of the slider bar which include displaying the current position of the video being displayed to the user. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. By implementing the slider bar as indicated above, the user will be able to easily indicate the location of the video desired based on the current position. Moeller discloses that indexing is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 26.

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Regarding claim **27**, Dawson discloses the limitation that the format of the nominal stream is defined by the MPEG-2 standard (see lines 52-58 of column 7 which indicates that the MPEG-2 macro blocks are used to identify static blocks of video content to extract from the nominal stream).

Regarding claim **30**, Dawson discloses the limitation that each portion of the complementary information sent by the server permits reconstitution of at least one image/picture of the original stream during the synthesis (as shown in Figures 3 and 4, the extracted information is a fixed block of an image (i.e. elements 305, 405, 415, and 425); further, as indicated in step 635 of Figure 6B, and in lines 3-8 and 15-18 of column 10, the extracted information portion is received at the receiver and used to replace the marred image portion and are then presented "as a part of a seamless video image frame"; thus, the portion of the complementary information (the extracted video information) is used to reconstitute one image of the original stream).

Regarding claim **32**, Dawson discloses the limitation that each portion of the complementary information is sent in advance relative to an instant of display of this picture of the stream reconstituted with the portion (the complementary information is sent in advance of the actual display of the associated picture as indicated in Figure 6B; the client requires some processing time to reconstitute the original image before it is displayed; this processing is performed in step 635 and thus, the complementary information is sent enough in advance

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relative to an instant of display to allow the first and second channels to be combined to replace the marred image portions).

Regarding claim **34**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Parent claim Dawson does not disclose expressly the limitation of claim 34. However, Moeller discloses that the server adapts sending video information when the user of the recipient equipment makes a rapid advance or a rapid return by sending a portion corresponding to a proper position for the commands "rapid advance" and "rapid return" (see lines 36-44 of column 13, for example, which indicates that a fast forward or fast reverse can be implemented with the slider bar discussed in the rejection of claim 20 above; thus, moving the slider bar forward or backwards; thus, the position information sent to the server (and then used by the server to send video corresponding to that new location as in step 208 of Figure 8) is an intuitive way to implement a "rapid advance" (fast forward) or "rapid return" (fast rewind)).

Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to implement the slider bar of Moeller including the intuitive fast forward and fast reverse functionality. In this combination, as indicated above for claim 20, the video stream sent by the server would include both the modified main stream (the video with marred content) as well as the complementary information (the extracted video information) to preserve the benefits of Dawson. Thus, adjusting the position to the index location would include sending the portion of the complementary information corresponding to



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the proper position for these "rapid advance" and "rapid return" commands. The rationale for doing so would have been to provide an intuitive way to allow the user to fast forward and rewind an on-demand video session as suggested by Moeller in lines 36-44 of column 13. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of providing an intuitive means of fast forwarding and rewinding to obtain the invention as specified in claim 34.

Regarding claim **36**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Primary reference Dawson does not disclose the limitations of claim 36.

Moeller discloses the limitation of prior to transmitting the video stream, the server creates a table associating pointers to the portion of the video information with temporal positions relative to images/pictures of the video stream (see lines 49-61 of column 4, lines 1-4 of column 9, and Figure 5, for example, which indicates that the server creates an index table for defining different locations in the stream; the index or offset into the respective stream is interpreted as the pointer and the normal play time standard is the temporal position relative to the images in the stream), store the table on a support connected to the server (see lines 24-26 of column 13, which indicates that the index tables "are stored either in the media server 50 or the set top box 57") and consults the table to determine a portion of video information to be transmitted after having received the position identifier (see lines 24-30 of column 5 which indicates that the server uses the table to determine the appropriate location in the stream from which to start transmitting).

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Dawson and Moeller are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Dawson to implement the slider bar of Moeller including the index table disclosed in the passages above. The index tables are required to enable the server to locate the appropriate stream position to send to the user based on the user's position adjustment via the slider bar. The rationale for doing so would have been to provide the ability to index to any location in a video when watching on-demand video. Moeller discloses that this is a highly desirable feature in the passage from line 65 of column 3 through line 29 of column 4. Therefore, it would have been obvious to combine Moeller with Dawson for the benefit of providing the indexing feature for on-demand video to obtain the invention as specified in claim 36.

Regarding claim **38**, the combination of Dawson and Moeller discloses the limitations of the process of claim 20 as indicated in the rejection above. Dawson further discloses the limitations of the system of claim 38 of equipment for producing a video stream (the transmitter 101 of Figure 1 is the equipment for producing a video stream), at least one piece of equipment for using a video stream (the receiver 103 of Figure 1 is equipment which uses the video stream) and at least one communication network between the production equipment and the piece or pieces of equipment (the network on which the channels 105a and 105b of Figure 1 are transmitted is the communication network between the transmitter and receiver).

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6. Claim **25** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,382,969 to Dawson (herein referred to as "Dawson '969") in view of U.S. Patent 5,903,264 to Moeller et al and in view of U.S. Patent Application Publication 2003/0222994 to Dawson (herein referred to as "Dawson '994").

Regarding claim **25**, the combination of Dawson '969 and Moeller discloses the limitations of parent claim 20 as indicated above. The combination of Dawson '969 and Moeller discloses part of the limitation of claim 25. Specifically, Moeller discloses the limitation that the reading of a stream on the recipient equipment conditions the position and the portion to be sent of the complementary information as follows. As indicated above, Moeller discloses in lines 1-12 of column 12 that the slider bar presents the user with an indication of the current relative location of video stream being received. (In lines 1-4 of column 12, Moeller indicates that "set top box 57 updates the location of the slider bar knob 55 within the slider bar 54 based on the position of the video stream received from the media server 50"). The user input on the slider bar is based on this location as the user moves the slider bar to select a location relative to the current position of the video; this in turn conditions the position and portion of the video which is sent as this value is sent to the server in order to request a new video position to be sent to the set top box (as indicated in Figure 8). In the combination of Dawson '969 and Moeller, this video sent to the set top box comprises the modified main stream (video with marred content) as well as the complimentary information (the extracted video) and thus, the reading of the stream conditions the position and portion of *complementary information* to be sent.

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However, while Moeller discloses that this position information is based on the *received* stream, the combination of Dawson '969 and Moeller does not disclose that the stream which is read to determine this slider position is the modified main stream as required by the claim language. However, Dawson '994 discloses a similar system and method to that of Dawson '969. Dawson 994 discloses that the position information is included in the modified main stream (see Figures 2a-c which show the position time stamp (PTS) value in the video frames 1-3 (210, 240, and 270) which are the video portion including marred content (i.e. the modified main stream)). At the time of the invention, it would have been obvious to specifically use this position information (from the modified main stream as indicated above) to update the slider bar of the Dawson '969 and Moeller combination to condition the position and portion of complementary information to be sent. The rationale for doing so would have been to provide a convenient means for determining the current "position of the video stream received from the media server" as specified by Moeller. While there are other conceivable means for determining the current position, it would be beneficial to base it off of the position information sent in this modified main stream as this is a very simple implementation. Therefore, it would have been obvious to combine Dawson '994 with Dawson '969 and Moeller to obtain the invention as specified in claim 25.

7. Claim **28** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,382,969 to Dawson in view of U.S. Patent 5,903,264 to Moeller et al and in view of U.S. Patent Application Publication 2005/0163231 to Kato.

Regarding claim **28**, the combination of Dawson and Moeller discloses the limitations of parent claim 27 as indicated above. The combination of Dawson and Moeller does not disclose expressly the limitation of claim 28. However, Kato discloses the limitation that the position identifier for an image/picture (see paragraph 0116 which indicates the representation of a picture index – this is interpreted as the position identifier) includes a time code variable associated with a group of images/pictures in which the image/picture under consideration is located (as indicated in paragraph 0116, this index is specified in part by the GOP (i.e. “Group of Pictures”) containing this picture) and the temporal reference variable of the image/picture (as also indicated in paragraph 0116, the index of the picture is indicated by the “temporal\_reference of B<sub>07</sub>”).

Dawson and Kato are analogous art because they are from the same field of endeavor of digital video technology. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Dawson and Moeller to utilize a position index comprising the GOP variable and temporal reference within the GOP. Moeller discloses the use of either a GOP index or a timestamp in lines 44-53 of column 10. Further, the MPEG encoding standard creates frames organized by Groups of Pictures (GOPs) and so identifying a picture using a GOP identifier and then a reference within the GOP is very convenient and intuitive. (See paragraphs 0010-0012 for a brief overview of this structure.) The P and B frames in a GOP are dependent upon other frames within the GOP; a decoder utilizes this structure when decoding video streams. The rationale for doing so would have been to provide a convenient means of identifying a position of a picture within a stream which is based on the structure of the frames for encoding/decoding. Therefore, it would have been obvious to combine Kato with

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Dawson and Moeller for the benefit of providing a convenient and intuitive means for identifying pictures to obtain the invention as specified in claim 28.

8. Claim **31** is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,382,969 to Dawson (herein referred to as "Dawson '969") in view of U.S. Patent 5,903,264 to Moeller et al and in view of U.S. Patent Application Publication 2004/0168185 to Dawson et al (herein referred to as "Dawson '185").

Regarding claim **31**, the combination of Dawson '969 and Moeller discloses the limitations of parent claim 20 as indicated above. The combination of Dawson '969 and Moeller further discloses the limitation that the server adapts the content of each portion of the complementary information to be sent as a function of the position identifier. In the above combination, the server indexes to a new position based on the position identifier sent by the client (as indicated in Figure 8 of Moeller). The video at this adjusted index position clearly adapts the content based on the position information. Further, as the video transmitted from the server includes both a modified main stream and complementary information in this combination, the content of each portion of the complementary information is adapted based on the position identifier.

However, the combination of Dawson '969 and Moeller does not disclose expressly the limitation that the server also adapts the size of each portion of the complementary information as a function of the position identifier. Dawson '185 discloses a system in which the video can

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be transmitted in a picture-in-picture (PIP) format to the subscriber. As indicated in Figure 4, when the video is transmitted in PIP format, the size of the video is adapted accordingly.

Dawson '969, Moeller, and Dawson '185 are analogous art because they are from the same field of endeavor of video processing. At the time of the invention, it would have been obvious to modify the above combination of Dawson '969 and Moeller to include PIP functionality similar to that of Dawson '185. Applying this to the above combination, the modified system discloses the limitations of claim 31. Specifically, as a function of the position identifier, the server adapts the content (as indicated above by adjusting the index of the video transmitted) and the size (as indicated in Figure 4 of Dawson '185, the size of the video information is also adapted when the video is PIP). Thus, in the combination of Dawson '969, Moeller, and Dawson '185, if the user adjusts the index of PIP video (using the slider bar functionality), the content and size of the video (modified main stream and complimentary information) are adapted as a function of the position identifier sent by the client. The rationale for doing so would have been to provide the user with the ability to simultaneously watch two streams at once (the normal stream and the PIP stream) and thus to improve the user's experience. Therefore, it would have been obvious to combine Dawson '185 with the combination of Dawson '969 and Moeller for the benefit of improving the user's experience to obtain the invention as specified in claim 31.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 7,382,969 to Dawson in view of U.S. Patent 5,903,264 to Moeller et al and in view of U.S. Patent Application Publication 2002/0010917 to Srikantan et al.

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Regarding claim **33**, the combination of Dawson and Moeller discloses the limitations of parent claim 20 as indicated above. Moeller further discloses the use of a pause command and pause button (see lines 6-9 of column 8, for example). However, the combination of Dawson and Moeller does not disclose expressly all the limitations of claim 33. However, sending a pause command to a server to pause sending video stream information is known in the art. Srikantan discloses the limitation that the sender adapts sending video information when the user of the recipient equipment pauses, thereby stopping the transmission of video information (see paragraph 0030, for example, which indicates that a client sends a number of commands to control the behavior of the server including a “Pause” command “to temporarily stop streaming”).

Dawson and Srikantan are analogous art because they are from the same field of endeavor of video streaming. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the above combination of Dawson and Moeller to implement the pause command such that it is transmitted to the server to pause the video streaming. Further, as the video streaming in the combination is comprised of the modified main stream (video with marred content) and complementary information (the extracted video), the stopping of streaming would include stopping the transmission of complementary information. The rationale for doing so would have been to optimize the utilization of bandwidth by stopping the transmission of the server when the user selects to pause the video. Therefore, it would have been obvious to combine Srikantan with Dawson for the benefit of conserving system bandwidth to obtain the invention as specified in claim 33.



*Allowable Subject Matter*

10. Claims **29 and 35** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- U.S. Patent Application Publication 2003/0046369 to Sim et al discloses a method for initializing a new node in a network.
- U.S. Patent Application Publication 2009/0282444 to Laksono et al discloses a method for managing the presentation of video.
- U.S. Patent Application Publication 2006/0271973 to Jerding discloses video promotional and advertising systems for video on demand.
- U.S. Patent 6,377,690 to Witschorik discloses a method for safe transmission of broadband data messages.
- “Designing a Distributed Multimedia Synchronization Scheduler” to Jarmasz et al discloses a means for providing synchronization for distributed multimedia applications.
- WO 02/15579 to So et al discloses a method for enabling random access to individual pictures in an encrypted video stream.

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- WO 01/78386 to Wajs discloses a system for scrambling and descrambling content.
- WO 00/44172 to Ramakesavan discloses a system for providing video on demand.
- “Protecting VoD the Easier Way” to Griwodz et al discloses an efficient method for protecting video on demand systems.
- FR 2 812 147 to Grieu et al discloses a method for streaming media over the internet.
- EP 0 949 815 to Tanaka discloses a method for image scrambling.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. SCHEIBEL whose telephone number is (571)272-3169. The examiner can normally be reached on Mon-Fri from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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